https://p4.org/p4/getting-started-with-p4.html

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sudo apt update

sudo apt-get install -y cmake g++ git automake libtool libgc-dev bison flex libfl-dev libgmp-dev libboost-dev libboost-iostreams-dev libboost-graph-dev llvm pkg-config python python-scapy python-ipaddr python-ply tcpdump doxygen graphviz texlive-full

sudo apt-get install autoconf autogen automake libtool python-pip

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git clone https://github.com/protocolbuffers/protobuf.git

cd protobuf

git checkout v3.2.0

git submodule update --init --recursive

./autogen.sh

./configure

make

make check

sudo make install

sudo ldconfig

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git clone https://github.com/p4lang/behavioral-model.git

cd behavioral-model

./install\_deps.sh

./autogen.sh

./configure

sudo make

sudo make install

sudo ldconfig

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git clone --recursive https://github.com/p4lang/p4c.git

cd ~/p4c

mkdir build

cd build

cmake ..

make -j4

make -j4 check

=====================================================================================

# First pair: veth0-veth1

sudo ip link add name veth0 type veth peer name veth1

sudo ip link set dev veth0 up

sudo ip link set dev veth1 up

sudo ip link set veth0 mtu 9500

sudo ip link set veth1 mtu 9500

sudo sysctl net.ipv6.conf.veth0.disable\_ipv6=1

sudo sysctl net.ipv6.conf.veth1.disable\_ipv6=1

# Second pair: veth2-veth3

sudo ip link add name veth2 type veth peer name veth3

sudo ip link set dev veth2 up

sudo ip link set dev veth3 up

sudo ip link set veth2 mtu 9500

sudo ip link set veth3 mtu 9500

sudo sysctl net.ipv6.conf.veth2.disable\_ipv6=1

sudo sysctl net.ipv6.conf.veth3.disable\_ipv6=1

# Second pair: veth4-veth5

sudo ip link add name veth4 type veth peer name veth5

sudo ip link set dev veth4 up

sudo ip link set dev veth5 up

sudo ip link set veth4 mtu 9500

sudo ip link set veth5 mtu 9500

sudo sysctl net.ipv6.conf.veth4.disable\_ipv6=1

sudo sysctl net.ipv6.conf.veth5.disable\_ipv6=1

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p4c -b bmv2 test.p4 -o test.bmv2

sudo simple\_switch --interface 0@veth0 --interface 1@veth2 --interface 2@veth4 test.bmv2/test.json &